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**Natural Resources Conservation Service** 

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# **About This Workbook**

As you go through this workbook and answer questions about your operation, you will get a good idea about whether you are eligible for the Conservation Security Program (CSP) at this time. You will answer "yes," "no," or "not applicable" to most questions, and be asked to describe your operation. If the question covers a topic that is not relevant to your part of the country, mark NA for not applicable. Lastly, you will find out the next steps to start the application process.

If you are not eligible at this time, you will find out about programs that can help you achieve a higher level of conservation so that you may apply for CSP in the future.

- To determine your eligibility for CSP and to self-assess your operation, turn to page 3 and begin the self-assessment workbook.
- For definitions and photos describing terms used in this workbook, go to the Glossary, Appendix 1, page 25.

- To learn more about the eligibility requirements for CSP, go to Appendix 2, page 42.
- To learn more about conservation planning and for guidance on how to move forward to address your resource concerns, go to Appendix 3, page 43, call or visit your local NRCS or conservation district office, or visit the NRCS Web site: www.nrcs.usda.gov.
- To learn more about conservation programs that may help you reach your conservation goals, turn to page 44.

This workbook also is available online from www.nrcs.usda.gov. The interactive site allows you to log on and off at your convenience to complete the workbook at your own pace. Also, you may request a compact disk (CD) from your local NRCS office; the CD will allow you to fill out and print pages, which you can then bring to your local office.

# About the Conservation Security Program

CSP supports ongoing conservation stewardship of agricultural lands by providing assistance to producers to maintain and enhance natural resources.

CSP is designed to reward the best conservationists and motivate the rest. CSP is a voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, and plant and animal life on Tribal and

private working lands. Working lands include cropland, grassland, prairie land, improved pasture, and rangeland, as well as forested land that is an incidental part of an agriculture operation.

The program is available in all 50 States, the Caribbean area, and the Pacific Basin area. The program provides equitable access to benefits to all producers, regardless of size of operation, crops produced, or geographic location.



# **Determine Initial Eligibility**

At this time, CSP is available in selected priority watersheds only. Producers located within these watersheds are eligible to apply for the program. For more information about the watersheds selected, contact your local NRCS office, or go to the NRCS Web page:

#### http://www.nrcs.usda.gov

List the location for the land, or portion of land, you wish to enroll. Note: The name or parcel identifier can be whatever term (or number) you want to use for the operation you wish to enroll in CSP.

NAME OR IDENTIFIER FOR PARCEL OR LAND UNIT				
ZIP CODE				
WATERSHED				
And/or LEGAL LOCATION				
(Section/Township/Range)				

Words in **BLUE** are defined in Appendix 1. Mark "NA" if the question is not applicable.

				PRODUCER ELIGIBILITY
☐ YES	□ NO	□ NA	1.	Do you share in the risk of producing crops or livestock on this operation? Note regarding landlords: Landlords who receive only cash payments for renting the land are not currently eligible to apply for CSP on that acreage. Landlords who share in the risk of producing the crop or livestock and would share in the crop or livestock produced are eligible.
☐ YES	□ №	□ NA	2.	Are you entitled to share in the crop or livestock available for marketing from the agriculture operation?
☐ YES	□ №	□ NA	3.	Do you have control of some or all of the land you manage for the life of the proposed 5- to 10-year contract period?
☐ YES	□ NO	□ NA	4.	Is your average adjusted gross income less than or equal to \$2.5 million, or if greater than \$2.5 million, did 75 percent come from farming, ranching, or forestry?  Note: To participate in CSP, your average adjusted gross income for the 3 tax years immediately preceding the year the contract is approved cannot exceed \$2.5 million, unless at least 75 percent of the income was derived from agriculture.  LAND ELIGIBILITY
				LAND ELIGIBILITY
☐ YES	□ NO	□ NA	5.	Is at least part of your land private agricultural land or Tribal land?  Note: Public land is not eligible for CSP.
☐ YES	□ NO	□ NA	6.	Is your land in compliance with the highly erodible land and wetland conservation provisions of the 1985 Farm Bill?
☐ YES	□ №	□ NA	7.	Was your cropland used for crop production or considered cropland as part of a long-term rotation for 4 out of the last 6 years prior to May 13, 2002?
☐ YES	□ NO	□ NA	8.	Is this land currently enrolled in the Conservation Reserve Program, Wetlands Reserve Program, or Grassland Reserve Program?  Note: Land enrolled in CRP, WRP, or GRP cannot be a part of the CSP contract. Other land in your operation may be eligible. For example: You have a 1.2-acre CRP buffer on a 40-acre parcel you wish to enroll. All but the 1.2 acres enrolled in the Conservation Reserve Program may be eligible for CSP.

#### STEP 1 ANSWERS (INITIAL ELIGIBILITY)

Below are the Initial Eligibility answers. If your answers differ, at this time you may not be eligible for CSP. Please review your responses, and answer only for the land, or portion of land, that you wish to enroll in the CSP.

You can turn to Appendix 2 for information on eligibility requirements, and go to the CSP Web page to read the specific language that covers person and land eligibility.

- 1. Yes
- 2. Yes
- 3. Yes
- 4. Yes
- 5. Yes
- 6. Yes or NA I am in compliance OR None of this land is highly erodible or considered wetlands.
- 7. Yes or NA My cropland meets this criteria OR This land is not cropland.
- 8. No or NA These acres are not enrolled in the Conservation Reserve Program, Wetland Reserve Program, or the Grassland Reserve Program.

# Assess Land Use

Words in **BLUE** are defined in Appendix 1.

#### WHAT KIND OF LAND USES DO YOU MANAGE?

Please check all land you wish to enroll in CSP.

Cropland (including Hayland), Vineyards, or Orchards
Note: Cropland includes permanent hayland and hayland as part of
a long-term rotation. Pasture that is not cultivated, but mowed for hay,
is addressed as a Pastureland land use.

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Rangeland

Page 13

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The following questions help to determine if the land you wish to enroll in CSP meets basic program requirements.

Farmstead, Headquarters, or Livestock Feeding and Handling Areas

#### CROPLAND (INCLUDING HAYLAND), VINEYARDS, OR ORCHARDS

These questions help determine if the non-irrigated and irrigated cropland, hayland, vineyards, or orchards you wish to enroll in CSP meet basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

#### Managing Fertilizers and Nutrients on Cropland, Vineyards, or Orchards

☐ YES	□ NO	□ NA	1.	Do you keep written records or documentation of your nutrient management activities for each field, such as yields, soil analysis, plant tissue analysis, and nutrients applied – including animal waste?
☐ YES	□ NO	□ NA	2.	Are you managing nutrients (for example, adding supplemental nitrogen) by following a nutrient management plan or schedule that budgets nutrients based on soil and crop needs, and environmental risk?
☐ YES	□ №	□ NA	3.	Do you conduct soil tests and/or plant tissue tests?
☐ YES	□ №	□ NA	4.	If you have abandoned or active water wells in your cropland, orchard, or vineyard, have you taken adequate steps to protect ground water?
☐ YES	□ №	□ NA	5.	If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydrologically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, wetlands, and wellheads)?
☐ YES	□ NO	□ NA	6.	If cropland, vineyards, or orchards are grazed, are you managing livestock access to rivers, streams, and other surface water?
☐ YES	□ №	□ NA	7.	If cropland, vineyards, or orchards are grazed, are you following a grazing plan which includes the following?  • Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions

- Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
- Identifying periods of grazing, rest, and other treatment for each management unit
- Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
- Not negatively impacting any cultural resource or sensitive species
- Identifying and monitoring key areas and key plants to evaluate grazing management decisions

☐ YES	□ NO	□ NA	8. If cropland, vineyards, or orchards are grazed, are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water?
			Managing Pests on Cropland, Vineyards, or Orchards
YES	□ №	□ NA	9. Do you keep written records or documentation of your pesticide application and pest control methods for each field?
☐ YES	□ №	□ NA	10. Are you following a pest management plan or schedule that includes, as needed, insects, invasive species, and weeds?
☐ YES	□ NO	□ NA	11. Are you scouting for pests and using the information as a basis for applying pesticides?
☐ YES	□ NO	□ NA	12. Have you assessed the environmental risks of pesticide use on your cropland, vineyards, or orchards and addressed any risks with appropriate measures?
			Managing Crops and Soil on Cropland, Vineyards, or Orchards
☐ YES	□ №	□ NA	13. Do you grow high-residue crops at least 1 in 3 years in rotation, apply a mulch, use a cover crop annually, and/or have hay/pasture in rotation?
☐ YES	□ NO	□ NA	14. Do you maintain cover between the rows of your vineyards or orchards?
☐ YES	□ NO	□ NA	<ul> <li>15. Do you include any of the following in your crop rotation:</li> <li>No-till, strip-till, direct seeding, or mulch-till</li> <li>Perennial sod or hay in rotation</li> <li>Add organic soil amendments such as manure or compost</li> <li>Grow cover and green manure crops to improve the soil</li> <li>If none of the above, do your soil tests indicate an increase in organic matter?</li> </ul>
☐ YES	□ №	□ NA	16. If you are in an area of saline or sodic soils, do you monitor soil salinity levels?
☐ YES	□NO	□ NA	17. If you have saline soils, do you use one or more of these techniques to manage salinity: managing your irrigation and drainage water, deep tillage, crop selection, reduction in fallow, and/or soil amendments or planting salt-tolerant crops?
☐ YES	□ №	□ NA	18. Do you avoid operating equipment in your cropland, vineyards, or orchards when soils are wet to reduce soil compaction?

☐ YES	□ №	□ NA	19. Are sheet and rill erosion controlled?
☐ YES	□ №	□ NA	20. Is wind erosion controlled?
☐ YES	□ NO	□ NA	21. Have you stabilized or treated ephemeral erosion or classic gullies on your operation?
			Managing Irrigation on Cropland, Vineyards, or Orchards
☐ YES	□ №	□ NA	22. Do you inspect and make repairs to your irrigation system at least annually?
☐ YES	□ NO	□ NA	23. Do you keep records of irrigation dates and irrigation amounts applied relative to the crop growth stage?
☐ YES	□ NO	□ NA	24. Do you adjust your irrigation management for nutrient and pesticide applications?
☐ YES	□ №	□ NA	25. Do you control irrigation-induced erosion, by using a cover crop, perennial cover, polyacrylamide (PAM), residue management, or irrigation water management?
☐ YES	□ №	□ NA	26. Are you following an irrigation water management plan?

#### **PASTURELAND**

These questions help to determine if the non-irrigated and irrigated pastureland you want to enroll in CSP meets basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

			Managing Water Quality on Pastureland
□ YES	□ NO	□ NA	<ol> <li>Are you following a grazing plan which includes the following?</li> <li>Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions</li> <li>Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques</li> <li>Identifying periods of grazing, rest, and other treatment for each management unit</li> <li>Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)</li> <li>Not negatively impacting any cultural resource or sensitive species</li> <li>Identifying and monitoring key areas and key plants to evaluate grazing management decisions</li> </ol>
YES	□ NO	□ NA	2. Is forage availability balanced with livestock and wildlife demands (e.g., forage and animal balance, including a completed forage production estimate, livestock numbers identified, and wildlife numbers estimated)?
□ YES	□ NO	□ NA	3. Do you keep written records or documentation of your pasture management activities for each field, such as grazing intensity, frequency, and duration of grazing periods, forage yields, livestock needs, soil analysis, and nutrients applied, including manure?
☐ YES	□ №	□ NA	4. Are you managing livestock access to rivers, streams, and other surface water?
☐ YES	□ №	□ NA	5. Do you conduct soil tests and/or plant tissue tests?
☐ YES	□ №	□ NA	6. Are you managing nutrients (for example, adding supplemental nitrogen) by following a nutrient management plan or schedule that budgets nutrients based on soil and plant needs and environmental risk?
☐ YES	□ NO	□ NA	7. If you have abandoned or active water wells in your pasture, have you taken adequate steps to protect ground water?
☐ YES	□ NO	□ NA	8. Are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water to protect water quality?

☐ YES	□ №	□ NA	9. If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydrologically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, wetlands and wellheads, etc.)?
			Managing Pests on Pastureland
☐ YES	□ №	□ NA	10. Have you assessed the environmental risks of pesticide use on your pasture and addressed any risks with appropriate measures?
☐ YES	□ №	□ NA	11. Do you keep written records or documentation of your pesticide application and pest control methods for each grazed area—pertaining to pesticide use and insect populations?
☐ YES	□ №	□ NA	12. Do you control noxious weeds and undesirable brush species?
☐ YES	□ NO	□ NA	13. When you control noxious weeds and undesirable brush species, are you following a pest management plan that includes measures to protect water quality?
			Managing Forage and Soil on Pastureland
☐ YES	□ №	□ NA	14. Do you manage grazing on pastureland to avoid soil compaction?
☐ YES	□ №	□ NA	15. Are sheet and rill erosion controlled?
☐ YES	□ №	□ NA	16. Is wind erosion controlled?
☐ YES	□ №	□ NA	17. Have you stabilized or treated classic gullies on your operation?
☐ YES	□ №	□ NA	18. If you are in an area of saline or sodic soils, do you monitor soil salinity levels?
☐ YES	□ №	□ NA	19. Do you manage salinity through one or more of the following: subsurface drainage, use of soil amendments, or use of appropriate crops (salt-tolerant forage)?
☐ YES	□ №	□ NA	20. Do you manage pasture access roads and trails to limit soil erosion?

☐ YES

☐ YES

☐ YES

☐ YES

□ ио

□ NA

# Managing Irrigation on Pastureland □ NO □ NA 21. Do you control irrigation-induced erosion? □ NO □ NA 22. Do you inspect and make repairs to your irrigation system at least annually? □ NO □ NA 23. Do you adjust your irrigation management for nutrient and pesticide applications?

24. Are you following an irrigation water management plan?

#### RANGELAND

These questions help to determine if the rangeland you wish to enroll in CSP meets basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

			Managing Water Quality on Rangeland
☐ YES	□ NO	□ NA	<ol> <li>Are you following a grazing plan which includes the following?</li> <li>Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions</li> <li>Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques</li> <li>Identifying periods of grazing, rest, and other treatment for each management unit</li> <li>Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)</li> <li>Not negatively impacting any cultural resource or sensitive species</li> <li>Identifying and monitoring key areas and key plants to evaluate grazing management decisions</li> </ol>
☐ YES	□ №	□ NA	2. Is forage availability balanced with livestock and wildlife demands (e.g., forage and animal balance, including a completed forage production estimate, livestock numbers identified, and wildlife numbers estimated)?
☐ YES	□ №	□ NA	3. Do you keep written records or documentation of range management activities for each grazed area—pertaining to intensity, frequency, and duration of grazing periods, forage production, and livestock needs?
☐ YES	□ №	□ NA	4. If you have abandoned or active water wells on your rangeland, have you taken adequate steps to protect ground water?
☐ YES	□ №	□ NA	5. Are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water to protect water quality?
☐ YES	□ №	□ NA	6. Are you managing livestock access to rivers, streams, and other surface water to maintain water quality?
☐ YES	□ №	□ NA	7. If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydro logically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, werlands, and wellheads)?

			Managing Pests on Rangeland
☐ YES	□ NO	□ NA	8. Do you keep written records or documentation of your pesticide management for each grazed area, such as chemical use and invasive plant populations?
☐ YES	□NO	□ NA	9. Have you assessed the environmental risks of pesticide use on your rangeland and addressed the risks with appropriate measures?
☐ YES	□ №	□ NA	10. Do you control noxious weeds and undesirable brush species?
☐ YES	□NO	□ NA	11. When you control noxious weeds and undesirable brush species, are you following a pest management plan that includes measures to protect water quality?
			Managing Forage and Soil on Rangeland
☐ YES	□ №	□ NA	12. Do you manage grazing on rangeland to avoid soil compaction?
☐ YES	□ NO	□ NA	13. Have you stabilized or treated classic gullies on your operation?
☐ YES	□ №	□ NA	14. Do you manage pasture access roads to limit soil erosion?
☐ YES	□ №	□ NA	15. If you burn, are you following a prescribed burning plan?

## FARMSTEAD, HEADQUARTERS, OR LIVESTOCK FEEDING

#### AND HANDLING AREAS

Note: This section is not required, except for the highest level of CSP.

These questions pertain if you wish to enroll your entire operation in CSP and help to determine if other areas within your operation meet basic program requirements. Mark "NA" if the question is not applicable.

Livestock Feeding and Handling Areas (production areas, including dairy, poultry, feeding operations, etc.)

☐ YES	□ №	□ NA	1.	Do you inspect for leaks in pipelines, manure storage, or transfer facilities and equipment?
☐ YES	□ №	□ NA	2.	Do you manage runoff from manure handling and feed handling areas?
☐ YES	□ NO	□ NA	3.	Do you control runoff from traps, lots, and other livestock concentration areas?
☐ YES	□ №	□ NA	4.	Do you properly dispose of livestock mortalities?
			We	ells
☐ YES	□ NO	□ NA	5.	Is the wellhead location appropriate and are protection components in place for all potential sources of contamination?  Sanitary well cap, tightly secured with a screened vent  Pitless adaptor  Other State-identified components  Surface runoff cannot reach the area immediately surrounding the well
☐ YES	□ №	□ NA	6.	Is your well cased?
☐ YES	□ №	□ NA	7.	Does the well casing extend above the ground (meets State and local standards)?
☐ YES	□ №	□ NA	8.	Are all abandoned wells properly plugged?

☐ YES

□ №

☐ NA

			Fertilizer/Pesticide Storage and Handling Areas
YES	□ №	□ NA	9. Is the well located a safe distance from the fertilizer/pesticide storage site and/or mixing and loading areas?
YES	□ №	□ NA	10. If the fertilizer/pesticide storage site is located on highly permeable soil (sandy soil), is there secondary containment?
YES	□ №	□ NA	11. Is rinse water from cleaning fertilizer/pesticide application equipment properl disposed of?

12. Are used pesticide containers properly disposed of?

#### STEP 2 Answers (Land Use)

Below are the self-assessment answers. If your answers differ, you may not be eligible for CSP at this time. Please see the information on the next page. To continue the pre-application process, go to "Describe Your Operation" on page 19.

Cropland, Vineyards, or Orchards		
1.	Yes or NA	
2.	Yes or NA	
3.	Yes or NA	
4.	Yes or NA	
5.	Yes or NA	
6.	Yes or NA	
7.	Yes or NA	
8.	Yes or NA	
9.	Yes or NA	
10.	Yes or NA	
11.	Yes or NA	
12.	Yes or NA	
13.	Yes or NA	
14.	Yes or NA	
15.	Yes or NA	
16.	Yes or NA	
17.	Yes or NA	
18.	Yes or NA	
19.	Yes or NA	
20.	Yes or NA	
21.	Yes or NA	
	Yes or NA	
	Yes or NA	
24.	Yes or NA	
25.	Yes or NA	

26. Yes or NA

Pas	Pastureland		
1.	Yes or NA		
2.	Yes or NA		
3.	Yes or NA		
4.	Yes or NA		
5.	Yes or NA		
6.	Yes or NA		
7.	Yes or NA		
8.	Yes or NA		
9.	Yes or NA		
10.	Yes or NA		
11.	Yes or NA		
12.	Yes or NA		
13.	Yes or NA		
14.	Yes or NA		
15.	Yes or NA		
16.	Yes or NA		
17.	Yes or NA		
18.	Yes or NA		
19.	Yes or NA		
20.	Yes or NA		
21.	Yes or NA		
22.	Yes or NA		
23.	Yes or NA		
24.	Yes or NA		

# Yes or NA Yes or NA

Rangeland

# Farmstead, Headquarters, or Livestock Feeding and **Handling Areas** (Required only if you wish to enroll your entire operation in CSP) Yes or NA 2. Yes or NA 3. Yes or NA 4. Yes or NA 5. Yes or NA 6. Yes or NA 7. Yes or NA 8. Yes or NA 9. Yes or NA 10. Yes or NA 11. Yes or NA

12. Yes or NA

# If You Are Not Eligible at This Time

If you evaluated your entire operation in the self-assessment and believe your operation is not eligible for CSP at this time, you may want to:

- Try the self-assessment again to identify a smaller portion of your land that may be eligible
- Identify the remaining conservation work outlined in your conservation plan. If you don't have a conservation plan, contact your local NRCS office for help in developing one for your farm or ranch. To find out more about conservation planning, see Appendix 3.
- Look to other conservation programs (listed in Appendix 3) for assistance in implementing conservation practices that may help you become eligible in the future
- Obtain technical assistance from your local NRCS office

# **Describe Your Operation**

This page shows an EXAMPLE in green. Your Description begins on the next page.

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

AG OPERATION NAME: Jones Farm and Ranch

#### For the land you wish to enroll in CSP:

- Describe your crop rotation and associated tillage OR
- Describe your pasture rotation and associated grass management

Land Use/ Field/Acres	Crop Rotation/Tillage OR Pasture Rotation/Grass Management	Conservation work already installed or in use on this field
crop Field 1 28 ac.	Corn/Soybean rotation - No-till corn into soybean residue. Disk corn residue one time prior to planting soybean in corn residue	Terraces, grassed waterway, reduced tillage
vange Novth End 240 ac.	120 acres 2 pasture switch back	Alternative watering sites, buffer, stream crossing, spring burn, salt placement

## For the land you wish to enroll in CSP:

• Describe any new or innovative activities, techniques, or methods used in your operation

Activity/technique/ method	Description
Yield Monitoring	tracking yield within the field and modifying fertilizer application throughout field based on yield map
Using Grazing and Spatial Analysis Tool (GSAT)	using GSAT to balance available forage and animal demand for the year

# **Describe Your Operation**

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

The name or parcel identifier can be whatever term (or number) you use for the operation you wish to enroll in CSP.

AG OPERATION NAME:	
--------------------	--

#### For the land you wish to enroll in CSP:

- Describe your crop rotation and associated tillage OR
- Describe your pasture rotation and associated grass management

Crop Rotation/Tillage OR Pasture Rotation/Grass Management	Conservation work already installed or in use on this field
	OR

# Describe Your Operation (cont.)

#### For the land you wish to enroll in CSP:

Describe any new or innovative activities, techniques, or methods used in your operation

Activity/technique/ method	Description

N 1	staple map here
	staple map here

# Workbook Completed! Congratulations!

Now that you have completed the self-assessment workbook, please bring the following to your local NRCS office to submit your application:

- 1. This completed workbook
- 2. Plan map or aerial photo of your operation (if available)
- Identification (and location, if possible) of practices installed on each field
- 4. The written records and documentation you've identified in the workbook (at least 2 years of records). See page 40 for examples of records you will need. Records can be as simple as a pocket calendar record or as complex as a computer printout.

- Number of acres and crop rotations for each field
- Management activities being used, such as nutrient management, pest management, grazing management, haying, etc.
- Application amounts and rates for fertilizers, pesticides, manure application, etc.
- 8. Location of wells, roads, windbreaks, storage buildings, etc.
- 9. If you do not own the land, copies of agreements that refer to the land you wish to enroll in CSP, such as lease, power of attorney, or a letter from the landowner indicating that you have current control of the farming operation.

# **Glossary of Terms**

## Appendix 1 – Descriptions and Definitions as used in this Workbook

# ABANDONED OR ACTIVE WATER WELLS

A well that is abandoned cannot or will not be used for human or livestock water consumption, or is in such a state of disrepair that ground water can no longer be obtained from it.

Abandoned or active water wells may provide a direct link for contamination from surface water to ground water. Agricultural chemicals, livestock waste, and other contaminants can filter through an abandoned well and contaminate ground water supplies.

Abandoned or active water wells should be capped for future use or decommissioned. Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.

An active well is a hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer to provide water for livestock, wildlife, irrigation, human, and other uses. Generally, wells provide for general water needs of farming/ranching operations and facilitate proper use of vegetation on rangeland, pastures, and wildlife areas.

#### **ACCESS ROAD**

An access road is a travelway to provide a safe, fixed route of travel for moving livestock, equipment, products, and supplies. This practice applies to roads that provide access to farm or ranch headquarters.

# ADDRESSED ANY RISKS WITH APPROPRIATE MEASURES

Using management procedures and installing conservation practices that mitigate or minimize the potential negative impacts of using pesticides. Examples include scouting to identify localized weed infestation and treating spot areas, selecting reduced-risk chemicals, and using available biological controls.

#### AGRICULTURE OPERATION

"Agricultural land, and other lands determined by the NRCS Chief, under the control of the participant and operated with equipment, labor, accounting systems, and management that is substantially separate from any other unit." In delineating an agricultural operation, Farm Service Agency farm boundaries may be used. An applicant can aggregate farms into one contract, but only one application per sign-up period will be accepted.

#### APPLY ANIMAL MANURE OR WASTE (see image below)

The process of spreading animal feces, urine, and other material, such as bedding material and water, onto crop fields, pastures or rangeland. It also includes injecting liquid components (wastewater) of animal waste into the soil.



Apply animal manure or waste

AVERAGE ADJUSTED GROSS INCOME	To participate in CSP, your average adjusted gross income (AGI) for the 3 tax years immediately preceding the year the contract is approved cannot exceed \$2.5 million. You may participate if your AGI exceeds \$2.5 million and at least 75 percent of your AGI was derived from farming, ranching, or forestry operations. As defined in the 2002 Farm Bill, "average adjusted gross income" means the 3-year average of the adjusted gross income or comparable measure of the individual or entity over the 3 preceding tax years, as determined by the Secretary. The 3 preceding tax years would be the 3 years before the year for which the benefits are being requested.
CLASSIC GULLY (see image below)	Erosion caused by the action of runoff water in concentrated flow channels. These flow channels are well-defined, permanent drainageways that cannot be crossed by ordinary farming operations.
Conservation Reserve Program	A voluntary program for agricultural landowners. Participants receive annual rental payments and cost-share assistance to establish long-term, resource-conserving covers on eligible land. More information about CRP is available at: http://www.nrcs.usda.gov/programs/crp/
CONSIDERED CROPLAND	Also see cropland definition. Land that is in cropland, or set aside for cropland. It may be in hayland as part of a long-term rotation.
CONTOUR BUFFER STRIPS (see image below)	Strips of perennial vegetation alternated down the slope with cultivated strips that are farmed on the contour. Contour buffer strips usually are narrower than the cultivated strips. Vegetation in strips consists of grasses or a mixture of grasses and legumes.
CONTROL OF SOME OR ALL OF THE LAND YOU MANAGE	The CSP participant does not need to own eligible land, but must demonstrate control of the land for the life of the CSP contract through ownership, a lease, or proof of a long-standing relationship as determined by NRCS. If the applicant is a tenant, the applicant must provide NRCS with the written evidence or assurance of control from the landowner.



Classic gully



Contour buffer strips

COVER (see image below)	Establishing and maintaining vegetation or mulch to protect soil and water resources. Cover may be permanent or temporary.	
COVER CROP	Grasses, legumes, forbs, or other herbaceous plants established for seasonal cover and conservation purposes. Examples include erosion control, nutrient cycling, carbon addition, wildlife habitat, and moisture regulation.	

# CROPLAND (INCLUDING HAYLAND), VINEYARDS, OR ORCHARDS

A land cover/use category that includes areas used for the production of adapted crops for harvest. Two subcategories of cropland are recognized: cultivated and noncultivated. Cultivated land is row crops or close-grown crops and hayland or pastureland that is in a rotation with row or close-grown crops. Noncultivated cropland includes permanent hayland and horticultural cropland. Some categories and sub-categories are:

- Row crops: Cultivated cropland comprising land in row crops, such as corn, soybeans, peanuts, potatoes, sorghum, sugar beets, sunflowers, tobacco, vegetables, and cotton.
- Hayland: Cropland managed for the production of forage crops that are
  machine harvested. These crops may be grasses, legumes, or a combination.
  Hayland also includes land in set-aside or other short-term agricultural programs.
- Horticultural cropland: Cropland used for growing fruit, nut, berry, vineyard, and other bush fruit and similar crops. Commercial flower operations, including bulb and seed production, ornamental cutting, and sales, are included.
- Close-grown crops: Crops generally drill-seeded or broadcast, such as wheat, oats, rice, barley, and flax.
- Fallow: Cropland which has been left idle, either tilled or untilled, during the whole or greater portion of the growing season.



Cover

CROP SELECTION	Selection of salt-tolerant crops can help produce satisfactory yields under saline conditions. The use of special management practices to minimize salinity can also favor crop growth.
DEEP TILLAGE	Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil; may be used to address a salinity problem. More information about salinity in agriculture is available from the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/
DIRECT CONDUITS	Channels for unimpeded flow of unfiltered contaminants to ground water. Unprotected wells, drainage wells, and sinkholes can act as direct conduits to ground water.
ENROLLED	The acres or area in question shall be considered enrolled in a conservation program at the time funds have been committed, a "tentative acceptance" letter has been sent to the participant, and the participant has indicated an interest to continue in the program.
ENVIRONMENTAL RISKS OF PESTICIDE USE	The process that analyzes soil characteristics, pesticide properties (toxicity, solubility, affinity for soil organic matter), management factors (pesticide timing, application rate, tillage type, method, form), and climate to evaluate the risks associated with pesticide use.
EPHEMERAL EROSION (see image below)	Erosion that occurs from the action of runoff water which concentrates in shallow flow channels when rills converge. These flow channels are obliterated or masked when filled with soil by tillage operations and re-formed in the same general location by subsequent runoff events.
FARMSTEADS, HEADQUARTERS, OR LIVESTOCK FEEDING AND HANDLING AREAS	Dwellings, outbuildings, barns, pens, corrals, confined livestock areas, and feeding and handling areas.



Ephemeral erosion

(see image below)



Farmsteads, headquarters, or livestock feeding and handling areas

# FORAGE AND ANIMAL BALANCE (see image below)

The total amount of available grazing forage and the addition of any roughage supply (hay, silage, green chop, etc.) balanced with the amount to be consumed by the total number of livestock and wildlife to meet their daily consumption needs.

#### GRASSLAND RESERVE PROGRAM

A voluntary program that helps landowners and operators restore and protect grassland, including rangeland, and pastureland, and certain other lands, while maintaining the areas as grazing lands. The program emphasizes support for grazing operations, plant and animal biodiversity, and grassland and land containing shrubs and forbs under the greatest threat of conversion. More information on GRP is available at: http://www.nrcs.usda.gov/programs/GRP/

# GRAZING PLAN (see image below)

Involves managing the controlled harvest of vegetation with grazing animals, including:

- Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions
- Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
- Identifying periods of grazing, rest, and other treatment for each management
- Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
- Not negatively impacting any cultural resource or sensitive species
- Identifying and monitoring key areas and key plants to evaluate grazing management decisions

See Conservation Practice Sheet for Prescribed Grazing.

#### **GREEN MANURE CROPS**

Close-growing crops that provide soil protection, seeding protection, and soil improvement between periods of normal crop production, and are incorporated into the soil.



Forage and animal balance



Grazing plan

# GROUND WATER RECHARGE AREAS

Places on the land where precipitation or surface water percolates through the soil to an underground bed or layer of earth, gravel, or porous stone that stores and yields water. Ground water flows in permeable geologic formations called aquifers, which are natural zones beneath the Earth's surface that often yield economically important amounts of water.

# HAY/PASTURE IN ROTATION (see image below)

Rotating long-term stands of hay or pasture with annual row crops for more than 2 years. This practice may be applied as part of a conservation management system to support one or more of the following: reduce soil erosion from wind; reduce sheet and rill erosion; maintain or improve soil organic matter; manage the balance of plant nutrients; improve water use efficiency; manage saline seeps; manage plant pests (weeds, insects, and diseases); provide food for domestic livestock; provide food and cover for wildlife.

#### **HAYLAND**

See cropland. Includes permanent hayland and hayland as part of a long-term rotation. For the CSP self-assessment, hayland is included as a cropland land use. Pasture that is not cultivated, but is mowed for hay, is addressed as a pastureland land use.

# HIGH-RESIDUE CROPS (see image below)

Crops that produce and leave high levels (more than 3,000 pounds per acre) of biomass in the field after crop harvest. High-residue crops can include corn, small grains, hay, and other crops expected to produce adequate crop residue for soil improvement and protection from erosion. The crop aftermath is left to protect the soil.



Hay/pasture in rotation



High-residue crops

# AND WETLAND CONSERVATION PROVISIONS OF THE 1985 FARM BILL

The Food Security Act of 1985, as amended, requires that all persons that produce agriculture commodities must protect all cropland classified as being highly erodible from excessive erosion. The provisions have been amended in the 1990, 1996, and 2002 Farm Bills. The purpose of these provisions is to remove the incentive to produce annually tilled agricultural commodity crops on highly erodible land (HEL) unless the HEL cropland is protected from excessive soil erosion. http://www.nrcs.usda.gov/programs/helc/

#### HYDROLOGICALLY ACTIVE AREAS

Areas such as sinkholes, wellheads, and rapidly permeable soil areas with direct access to ground water recharge areas or ground water.

#### **IRRIGATION-INDUCED EROSION**

The flow of irrigation water which causes soil erosion, which removes topsoil and organic material needed to maintain or improve soil condition.

# IRRIGATION WATER MANAGEMENT (see image below)

The process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner. An irrigation water management plan can include:

- Records of irrigation dates and irrigation amounts applied relative to the crop growth stage
- Monitoring soil moisture, using techniques such as gypsum block, tensiometer, or other technology
- Using irrigation scheduling techniques such as checkbook, evaporation pan, local climatic network, or similar technique
- Matching your crop production goals, crop variety, and planting dates to available water supply or projections
- Adjusting the timing, rate, and duration of water application to meet the crop needs
  - Adjusting your irrigation management for nutrient and pesticide applications
- Using a tailwater recovery system
- Inspecting and making repairs to your irrigation system at least annually

See Conservation Practice Sheet for Irrigation Water Management.

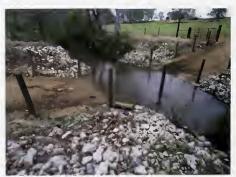


Irrigation water management

### Limestone areas with a topography peculiar to and dependent upon underground KARST TOPOGRAPHY waters or solutions and that direct surface waters to underground routes. Livestock in a confined area, such as a feedlot or drylot, and given supplemental LIVESTOCK CONCENTRATION feed for all of their nutritional needs. AREAS (see image below) Managing or limiting access of livestock to streams, ponds, surface waters, and MANAGING LIVESTOCK ACCESS waterways to prevent degradation of the streambank through activities such as the (see image below) use of livestock access ramps or points, limiting use of riparian pastures, or use exclusion. See Conservation Practice Sheet for Use Exclusion. Manure handling areas are areas where manure is loaded or moved for transport or MANURE HANDLING AND storage. Feed handling areas are areas where foodstuffs for cattle are stored and FEED HANDLING AREAS transported for distribution. These areas are generally at a farm headquarters loca-(see image below) tion.



Livestock concentration areas



Managing livestock access



Manure handling and feed handling areas

### MANURE STORAGE OR TRANSFER FACILITIES (see image below)

Areas designed to store or transfer livestock manure. Livestock waste includes manure that may also contain bedding, spilled feed, water, or soil. It also can include wastes not particularly associated with manure, such as milking center or washing wastes, and milk, hair, feathers, or other debris. The manure storage area includes, but is not limited to, lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, and composting piles.

# MIXING AND LOADING AREAS (see image below)

Areas for pesticide or fertilizer mixing and loading.

### NO-TILL, STRIP-TILL, DIRECT SEEDING, OR MULCH-TILL (see image below)

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops in narrow slots, or tilled or residue-free strips in soil previously untilled by full-width inversion implements. The soil is left undisturbed from harvest to planting, except for nutrient injection. Seeds are placed in a narrow seedbed or slot made by coulter(s), row cleaners, disk openers, in-row chisels, or Rototillers, where no more than one-third of the row width is disturbed. Weeds are controlled primarily with herbicides. Row cultivation for emergency weed control utilizes undercutting implements that minimize residue burial.

#### **NOXIOUS WEEDS**

Plant species that have been designated "noxious" by law. The word "noxious" means harmful.

#### NUTRIENT MANAGEMENT

Accounts for the amount, source, timing, and method of applying nutrients to a growing crop. Regular soil testing, which estimates the availability of nutrients to plants, is necessary to monitor the balance of phosphorus, potassium, and other nutrients over the crop rotation. Plant tissue analysis complements soil testing by measuring the nutrients actually taken up by the plant.

See Conservation Practice Sheet for Nutrient Management.



Manure storage or transfer facilities



Mixing and loading areas



No-til

PAM	Water-soluble anionic polyacrylamide (PAM) applied to soils in irrigation water to control soil losses from furrows. The polymers in PAM help give the surface soils more stability. PAM is an environmentally safe industrial flocculent.
PASTURELAND (see image below)	Land managed primarily for the production of introduced forage plants. Pasture-land cover may consist of a single species, a grass mixture, or a grass-legume mixture. Management usually consists of cultural treatments, such as fertilization, weed control, reseeding, or renovation, and prescribed grazing.
PERENNIAL COVER	Grasses, forbs, and legumes maintained as ground cover to protect soil year-round. Perennial species live through more than two growing seasons. Other crops, such as some clovers, have a 2-year growth cycle.
PEST CONTROL METHODS	Include consideration of both the environmental and human health impacts.  There are a number of effective methods that, when used properly, reduce pest populations to economically acceptable levels, including pesticides and biological and cultural techniques.
PEST MANAGEMENT	Using environmentally sensitive prevention, avoidance, monitoring, and suppression strategies to manage weeds, insects, diseases, animals, and other organisms (including invasive and non-invasive species) that directly or indirectly cause damage or annoyance.  A pest management plan can include: rate, method, timing, risk assessment, integrated pest management, appropriate mitigation, and recordkeeping.
	See Conservation Practice Sheet for Pest Management.
PITLESS ADAPTER	A special pipe fitting that fits on a well casing to provide a sanitary and frost-proof seal between the casing and the water line.
PLANT TISSUE TESTS	Plant tissue analysis complements soil testing by measuring the nutrients actually contained in the plant. Secondary nutrients and micronutrients not routinely measured in soil tests can be measured in plant tissue.



Pastureland

PRESCRIBED BURNING (see image below)	A carefully planned activity to safely apply fire to predetermined areas on rangeland, native pasture, pastureland, or hayland to obtain management objectives,			
	such as brush removal or to favor native or indigenous plants.			
	See Conservation Practice Sheet for Prescribed Burning.			
PRIVATE AGRICULTURAL LAND	To be eligible for enrollment in CSP, land must be private agricultural land			
	(including cropland, grassland, prairie land, improved pasture land, and range-			
	land), land under the jurisdiction of an Indian tribe (43 U.S.C. 1601 et seq.), and forested land that is an incidental part of an agricultural operation.			
PROPERLY DISPOSE OF	Treatment or disposal of livestock and poultry carcasses by off-the-farm animal			
LIVESTOCK MORTALITIES	mortality facilities or processes or by on-farm facilities.			
PROTECT GROUND WATER	Storing chemicals, gasoline, oil, etc., away from the wellhead and periodic inspec-			
	tion to protect ground water and maintain the condition where concentration cri-			
	teria for a particular pollutant or limits on a condition (e.g., bad taste) are within tolerance, thereby allowing safe use of water by humans or animals.			
RANGELAND	Land on which the climax or potential plant cover is composed principally of			
	native grasses, grass-like plants, forbs or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. This would include			
	areas where introduced hardy and persistent grasses, such as crested wheatgrass, are			
	planted and practices, such as deferred grazing, burning, chaining, and rotational grazing, are used with little or no chemicals or fertilizer being applied. Grassland,			
	savannas, many wetlands, some deserts, and tundra are considered rangeland. Cer-			
	tain low-growing forb and shrub communities, such as mesquite, chaparral,			
	mountain shrub, and pinyon-juniper, are also included as rangeland.			
REDUCTION IN FALLOW	More frequent cropping to reduce fallow periods and improve water uptake to			
	address salt-affected soils.			
RESIDUE MANAGEMENT	Managing the amount, orientation, and distribution of crop and other plant			
(see image below)	residues on the soil surface year-round, while growing crops.			



Prescribed burning



Residue management

RIPARIAN VEGETATION (see image below)	Ecosystems that occur along water courses or at the fringe of water bodies. Riparian cover consists of grasses, grasslike plants, forbs, trees, and shrubs.
	See Conservation Practice Sheets for Riparian Forest Buffer or Riparian Herbaceous Buffer.
ROTATION	Alternating crops in a planned sequence to provide diversity and crop residue needed for erosion control, soil conditioning, and pest management purposes.
SALINE AND SODIC SOILS	Includes soils that have a sodium adsorption ratio (SAR) of values of 13 and greater. Salt is sufficiently high in concentration that crop yields are adversely affected. These soils may require amendment applications, as determined by soil testing, to replace adsorbed sodium with soluble calcium. Monitoring saline soils may be part of a soil salinity plan that includes management of land, water, and plants to control subsurface soil water movement and to minimize accumulations of salts on the soil surface and in the root zone of nonirrigated saline seep areas. For more information about salinity in agriculture, visit the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/
SALINE SEEPS	An area on the landscape where saline water leaches to the surface.
SALT-TOLERANT CROPS	Salt tolerance can change during the life cycle of a plant. Generally, sugar beets, cotton, barley, grapes, wheat, alfalfa, red clover, beans, and citrus are known for a level of salt tolerance.
SCOUTING (see image below)	Scouting, or monitoring pest populations, is part of an integrated pest management (IPM) system. IPM prescribes treating the portions of a farm or field that have identified higher than threshold levels of pests, rather than treating the whole field, resulting in using less applied farm chemicals.
SETBACKS FROM SURFACE WATERS	A distance from gullies, ditches, streams, and rivers (surface water or direct conduits), within which manure, wastes, and pesticides should not be applied. The setback or buffer distance is based on slope, soils, vegetation, and sensitivity of the watershed.



Riparian vegetation



Scouting

# SHARE IN THE RISK OF PRODUCING CROPS OR LIVESTOCK ON THIS OPERATION

An owner, operator, landlord, tenant, or sharecropper who materially participates and shares in the risk of producing any crop or livestock; and is entitled to share in the crop or livestock available for marketing from a farm (or would have shared had the crop or livestock been produced).

# SHEET AND RILL EROSION (see image below)

The wearing away of topsoil by raindrop impact that detaches and removes soil from one point on the Earth's surface and deposits it elsewhere. Sheet erosion refers to the removal of a relatively uniform thin layer of soil from the land surface by rainfall and surface runoff. Rill erosion refers to the erosion process on sloping fields in which numerous and random small channels are formed by water; occurs mainly on recently cultivated soils.

# SINKHOLES

(see image below)

A surface opening that has direct connection to ground water.

#### **SOIL AMENDMENTS**

The compounds added to correct saline-sodic soils, based on the amount of sodium in the soil related to the soil pH. Gypsum is the most commonly used soil amendment.

#### SOIL COMPACTION

An increase in soil bulk density, and decrease in soil porosity, due to mechanical forces or livestock, which can limit root growth.

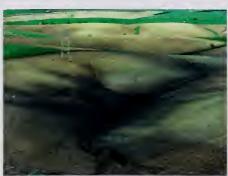
In grazing terms, soil compaction is influenced by animal concentration and length of grazing period, as well as soil moisture and soil texture. If the soils are too moist during grazing periods, layers immediately below the surface can become compact and impede water and air infiltration, as well as root growth. Rotating or moving winter feeding areas helps prevent compaction.

# SOIL MOISTURE MONITORING (see image below)

The process of applying irrigation water based on measuring soil moisture and the plant-available water holding capacity of the soil.

#### **SOIL TESTS**

A chemical, physical, or biological procedure that estimates the availability of nutrients to support plant growth. Generally, an analysis of nitrogen, phosphorus, and potassium is provided.



Sheet and rill erosion



Sinkholes



Soil moisture monitoring

SOILS ARE WET	Working or grazing wet soil tends to compress the soil particles so that they become more tightly packed, leaving less room for penetration of water and air. This also makes it more difficult for plant roots to move through the soil. Wet soils are more often a problem in fine textured soils. 'Fine textured soils' is a broad group of soils with large quantities of silt, clay, and other fine particles.
STABILIZED OR TREATED	Ephemeral erosion control practices that can include the use of waterways, modified tillage, terraces, contour buffer strips, or a combination of appropriate practices. Classic gullies require additional grade stabilization. Grade stabilization may include a structure used to control the grade and head cutting in natural or artificial channels.
SUBSURFACE DRAINAGE	Below-ground movement of water that may be diverted by conduits or impervious soil strata.
SURFACE WATERS (see image below)	All water occurring above ground. This includes wetlands, lakes, rivers, and streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or ponds.
TAILWATER RECOVERY SYSTEM (see image below)	A practice or group of practices installed to collect, store, and reuse irrigation water.
UNPROTECTED WELLS	Old wells, improperly installed wells, and abandoned or active water wells that impact ground water. Runoff can carry contaminated water into low-rising, unprotected well openings.  Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.
USED FOR CROP PRODUCTION	Land that is planted or considered planted to an agricultural commodity 4 out of the last 6 years prior to May 13, 2002.
WASTE UTILIZATION (see image below)	Using agricultural waste, such as manure and wastewater or other organic residues, on land in an environmentally acceptable manner while maintaining or improving soil, water, air, plant, and animal resources.







Tailwater recovery system



Waste utilization

WELL CASING	Maintains the well opening and is generally steel or PVC in drilled wells. Well casing should extend to at least 1 foot above ground or above the 100-year flood level.
WELLHEADS	That portion of the well that extends above ground level and offers a direct opening to ground water.
WETLANDS (see image below)	Areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated hydric soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
WETLANDS RESERVE PROGRAM	A voluntary program that provides technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands in an environmentally beneficial and cost-effective manner. The program provides an opportunity for landowners to receive financial incentives to enhance wetlands in exchange for retiring marginal land from agriculture. More information on WRP is available at: http://www.nrcs.usda.gov/programs/wrp/
WIND EROSION (see image below)	The wearing away of topsoil by winds that abrade, detach, and remove soil from one point on the Earth's surface and deposit it elsewhere.
WRITTEN RECORDS OR DOCUMENTATION	Field diaries and logs which may include names, rates, and dates of application of all fertilizers, manures, composts, and pesticides.

(see image below

and examples on following pages)

On range and pastures, this means keeping records on grazing rates, timing, and animal distribution to keep both livestock and forage plants healthy and to protect soil and water quality. Documentation needed to support such criteria may include (but would not be limited to):

- Grazing duration, frequency, timing and rest by management unit
- Hay harvest and yields
- Kind, type, size, and number of grazing animals
- Site and production by management unit
- Weather and other climate information
- Monitoring sites information



Wetlands



Wind erosion



Written records or documentation

# Field Record # \_\_\_0

Year 20XX Field Size 135A

Field ID East Quarter

Location or Legal Description \_\_\_\_\_

Soil Type/O.M. Silt loam/ 1.5%

Crop/Variety Corn/Good yield 546

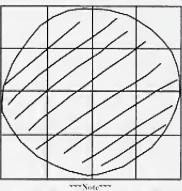
Previous Crop/Variety <u>Corn</u>

Seeding Rate 28,000 Final Population 26,500

Planting Date 5/1 Harvest Date 10/20

Expected Yield 185 Actual 165

% Moisture 18



If a spot treatment (less than 3/10 acret application is made, write "spot" in "size of area treated".

# Pesticide Application Record

Application	#1	#2	#3	#4
*Application date	4/28	5/1	6/15	
*Pesticide product name	Lasso	Counter 15G	Lorsban 4E	
*Pesticide EPA reg. no.	524-314	241-238	62719-220	
*Total RUP applied	337.5 qts.	1174.5 lbs	135 pints	
Applicator's name (from master list)	Bill	Jerry	Jerry	
Crop, commodity or site	Corn	Corn	Corn	
Size of treated area	135 Acre	135 Acre	135 Acre	
Conditions (wind, temperature, etc.)	5 mph 65° F	10-15 mph 74° F	5-10 mph 82° F	

# Field Record Examples – PASTURE AND RANGE

Number of animals	Date in	Date out	Days grazed	Animal Units	AUMs Used Days x AUs/30.4 refer to page 14	Use Class (1-5)	Notes	
50	1/1	5/30	150	50	247	2		
50	9/1	12/31	120	50	197	3		
AUMs				Total →		AUMs		
Available: Ise Class: 1	500		0 11	ht (16 - 35%)	3 = Moderate (36-	Balance:	+56 (66 - 80%) 5 = Severe (81 - 100%)	
			, all	re number	ventory  Land Use	Acres Ava		

# More About CSP

Appendix 2

#### CONSERVATION SECURITY

#### PROGRAM (CSP)

CSP is a voluntary program that has a unique role among USDA conservation programs. CSP identifies and rewards the Nation's premier farm and ranch land conservationists who meet the highest standards of conservation environmental management.

### **Initial Eligibility**

CSP is available to agricultural producers, including Tribal producers. Private agricultural land (including cropland, grassland, prairie land, improved pasture land, and rangeland), land under the jurisdiction of an Indian tribe, and forested land that is an incidental part of the agricultural operation are eligible for enrollment in CSP. Land enrolled in the Conservation Reserve Program, Wetlands Reserve Program, and Grassland Reserve Program, and land converted to cropland after the enactment of the CSP legislation are not eligible.

#### **Self-Assessment**

The CSP-self assessment process enables farmers and ranchers to evaluate their eligibility for the program.

You may apply on all or on a portion of your land. You will identify and describe the land unit in the self-assessment.

Because of the rigorous eligibility criteria required for this year's CSP, the current level of conservation activity on your operation may not qualify for a CSP contract at this time. However, you may be eligible for a wide range of other conservation assistance programs that can help you address natural resource concerns to a level that could help you qualify for CSP in the future.

If you are not eligible this year, your next steps will include setting your objectives based on your natural resource concerns and farming/ranching operation, developing a conservation plan, and finding the appropriate educational, financial, and technical assistance to help you.

#### **Treatment Requirements**

- All CSP producers must meet minimum treatment criteria for soil quality and water quality
- Techniques to achieve soil and water criteria will vary, depending on your farm's slope, climate, and other characteristics
- Treatment may include managing nutrients and pesticides, erosion control, and buffers

# **Conservation Planning**

## Appendix 3

Conservation planning can help you identify resource issues for treatment.

#### **CONSERVATION PLAN**

A conservation plan is record of the client's decisions for addressing natural resource concerns on a farm, ranch, or other unit of land or water. The plan results from a decision making process that documents practices needed to meet producer objectives and the Field Office Technical Guide quality criteria for identified resource problems.

A conservation plan may operate on a number of levels, depending on the goals and commitment level of the land owner. The plan can outline ways to meet the required conservation treatments for a specific program, or it may describe a situation where all natural resources of the land and water are being fully protected or even enhanced.

The Natural Resources Conservation Service (NRCS) provides conservation planning and technical assistance to clients (individuals, groups, and units of government). These clients develop and implement conservation plans to protect, conserve, and enhance natural resources (soil, water, air, plants, and animals) within their related social and economic interests.

The success of conservation planning and implementation depends upon the voluntary participation of clients. The planning process used by NRCS is based on the premise that clients will make and implement sound decisions if they understand their resources, natural resource problems and opportunities, and the effects of their decisions.

Conservation planning helps clients, conservationists, and others view the environment as a living system of which humans are an integral part. It enables clients and planners to analyze and work with complex natural processes in definable and measurable terms.

Developing a conservation plan for your farm or ranch is a key step in achieving your conservation objectives. A conservation plan will not only provide the foundation for your participation in the Conservation Security Program and other conservation programs but it can help you:

- Provide sustainability in natural resource management
- Receive funding through Farm Bill programs
- Save money through increased productivity
- Increase your property value
- Enhance open space and wildlife habitat
- Improve animal health
- Prevent off-farm impacts
- Improve plant health and vigor
- Promote good neighbor relations
- Compete for State and Federal cost-share programs
- Promote health and safety for your family

#### **CONSERVATION PROGRAMS**

#### AND ASSISTANCE

The conservation programs described below may help in solving your resource concerns. For more information on these and other programs, check the Web sites listed below for each program, visit NRCS at: http://www.nrcs.usda.gov/, or contact your local NRCS office.

#### NOTE:

- Producers can get cost-share assistance to plan and install conservation practices, such as terraces, buffers, nutrient and pest management, irrigation water management, grazing management, and wildlife habitat management through programs such as EQIP and AMA.
- Assistance is available to help producers with buffers, filter strips, and windbreaks to control runoff into streams and to provide wildlife habitat through WHIP, the Continuous CRP, EQIP, and AMA.
- Technical and financial assistance to develop upland, wetland, riparian, and aquatic habitat areas is available through WHIP.
- Technical and financial assistance to landowners interested in restoring converted cropland back into wetlands is available through WRP.

### Agricultural Management Assistance

(AMA): AMA provides cost-share assistance to agricultural producers for constructing or improving water management structures or irrigation structures; planting trees for windbreaks or to improve water quality; and mitigating risk through production diversification or resource conservation practices, including soil erosion control, integrated pest management, or transition to organic farming.

http://www.nrcs.usda.gov/programs/ama/

#### Conservation Reserve Program

(CRP): CRP is a land retirement program for blocks of land or strips of land that protect the soil and water resource, such as buffers and grassed waterways. http://www.nrcs.usda.gov/programs/crp/

#### Conservation Technical Assistance

(CTA): CTA provides free technical assistance to help farmers and ranchers identify and solve natural resource problems on their farms and ranches. This might come as advice and counsel, through the design and implementation of a practice or treatment or as part of an active conservation plan. This is provided through your local Conservation District and NRCS.

http://www.nrcs.usda.gov/programs/cta/

#### **Environmental Quality Incentives**

**Program (EQIP):** EQIP offers costshare and incentive payments and technical help to assist eligible participants in installing or implementing structural and management practices on eligible agricultural land.

http://www.nrcs.usda.gov/programs/eqip/

#### Wetlands Reserve Program (WRP):

WRP is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. Easements and restoration payments are offered as part of the program.

http://www.nrcs.usda.gov/programs/wrp/

#### Wildlife Habitat Incentives Program

(WHIP): WHIP is a voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Cost-share payments for construction or re-establishment of wetlands may be included.

http://www.nrcs.usda.gov/programs/whip/

#### WATER AND SOIL

#### QUALITY CRITERIA

Addressing soil and water quality resource concerns demonstrates a strong commitment to conservation.

Meeting quality criteria to treatment levels is required to address resource concerns for a particular land area. Established in accordance with local, State, and Federal programs, quality criteria address regulations in consideration of ecological, economic, and social effects. Quality criteria are located in the Field Office Technical Guide, Section III, available in local NRCS offices.

Some examples of water and soil quality criteria are listed below:

### Water Quality (Surface water)

- Harmful Levels of Pesticides in Surface Water – Pesticides are applied, stored, handled, disposed of, and managed such that surface water uses are not adversely affected
- Excessive Nutrients and Organics in Surface Water – Nutrients and organics are stored, handled, disposed of, and managed such that surface water uses are not adversely affected

- Excessive Suspended Sediment and Turbidity in Surface Water – Movement of mineral and organic particles is managed such that surface water uses are not adversely affected
- Excessive Salinity in Surface Water –
  Salts are stored, handled, disposed
  of, applied, and managed such that
  surface water uses are not adversely
  affected
- Harmful Temperatures of Surface Water – Use and management of land and water are coordinated to minimize impacts on surface water temperatures

#### Water Quality (Ground water)

- Harmful Levels of Pesticides in Groundwater – Pesticides are applied, stored, handled, disposed of, and managed so that groundwater uses are not adversely affected
- Excessive Nutrients and Organics in Groundwater – Nutrients and organics are stored, handled, disposed of, and applied such that groundwater uses are not adversely affected
- Excessive Salinity in Groundwater –
  Salts are stored, handled, disposed
  of, applied, and managed such that
  groundwater uses are not adversely
  affected

#### Soil Quality

- Sheet/Rill Erosion Sheet and rill erosion do not exceed the Soil Loss Tolerance "T"
- Wind Erosion Wind erosion does not exceed the Soil Loss Tolerance "T" or, for plant damage, does not exceed Crop Damage Tolerances
- Ephemeral Gully Erosion Surface water runoff is controlled sufficiently to stabilize the small channels and prevent recurrence of new channels
- Classic Gully Erosion Surface water runoff is controlled sufficiently to stop progression of headcutting and widening
- Irrigation-Induced Erosion –
   Irrigation-induced erosion does not exceed the Soil Loss Tolerance "T"
- Soil Condition-Organic Matter Depletion – Soil Conditioning Index is positive
- Soil Condition-Compaction –
   Mechanically compacted soils are
   renovated sufficiently to restore
   plant root growth and/or water
   movement

## CONSERVATION PRACTICE SHEETS

The following practice sheets give general information about several conservation practices mentioned in this workbook.

#### IRRIGATION WATER

#### MANAGEMENT

Definition: Irrigation water management includes determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner.



#### **Practice Information**

The purpose of this practice is to effectively use available irrigation water in managing and controlling the moisture environment of crops and other vegetation. The objectives are to promote a desired response, minimize soil erosion, minimize loss of plant nutrients, and protect both the quantity and quality of water resources.

This practice is applicable to all areas that are suitable for irrigation and have a water supply of suitable quality and quantity. In addition, a suitable irrigation system must be available and the irrigator needs to have the knowledge and capability to manage irrigation water. The following knowledge is required to properly manage irrigation water:

- How to determine when to apply water based on the rate of use by the crops at various stages of growth
- 2. How to measure or estimate the amount of water required for each irrigation
- The time needed for the soil to absorb the required amount of water

- 4. How to detect changes in intake rate
- How and when to adjust stream size, application rate, and irrigation time to compensate for changes in the soil or topography that affect intake rate
- 6. How to recognize erosion caused by irrigation
- 7. How to evaluate the uniformity of water application

Evaluating the efficiency of applying irrigation water is expensive and time consuming. Therefore, the physical irrigation system and the technician's evaluation of the irrigator's knowledge are acceptable in determining whether good irrigation water management is being practiced.

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 449.

#### NUTRIENT MANAGEMENT

Definition: Nutrient management involves managing the amount, form, placement, and timing of plant nutrients to obtain optimum yields and minimize the risk of surface and groundwater pollution.



#### **Practice Information**

Nutrient management may be used on any area of land where plant nutrients are applied to enhance yields and maintain or improve the chemical and biological condition of the soil. The source of plant nutrients may be from organic wastes, commercial fertilizer, legumes, or crop residue. The objective is to apply the proper amount of nutrients at the proper time to achieve the desired yield and minimize entry of nutrients into surface or groundwater supplies.

Planning nutrient management includes the following considerations:

- National, State, and local water quality standards
- 2. Sources and forms of plant nutrients available to the farmer
- Amounts and timing of nutrients based on soil testing, planned yield, and growing season of target plants

- 4. Evaluating use of crop rotations that enhance efficiency of nutrient utilization and improve soil tilth
- Consideration of waste storage requirements and land area requirements for proper management of plant nutrients

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 590.

#### PEST MANAGEMENT

Definition: Pest management involves managing weeds, insects, and diseases to reduce adverse effects on plant growth, crop production, and natural resources.



#### **Practice Information**

This practice establishes the minimum acceptable elements of a pest management program. It includes appropriate cultural, biological, and chemical controls and combinations thereof.

The purpose of the practice is to establish a pest management program that is consistent with crop production goals and environmental concerns.

The following are major considerations regarding the pest management practice:

- 1. Use integrated pest management principles to assure the techniques are environmentally sound
- 2. Use crop rotations to break up pest cycles
- 3. Use hand weeding or spot treatment when appropriate
- 4. Use biological control and beneficial insects
- 5. Scout fields and apply chemicals at the correct time and dose rate
- Consider the effects of repetitive use of the same chemicals on pesticide resistance

- 7. Control erosion to reduce runoff and associated pollution
- 8. Use field borders and buffer strips to reduce potential for pollution from runoff
- Become familiar with common pests, including life cycles, and learn alternative control techniques
- 10. Use chemicals safely
- 11. Always follow label instructions
- 12. Use extreme care in preparing tank mixes and rinsing chemicals from tanks
- 13. Assure farm workers are properly trained in safety precautions

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 595.

#### PRESCRIBED BURNING

Definition: Prescribed burning is applying controlled fire to a predetermined area of land.



#### **Practice Information**

This practice applies to all land uses for the following purposes:

- Controlling undesirable vegetation
- Preparing sites for planting or seeding
- Controlling plant diseases
- Reducing wildfire hazards
- Improving wildlife habitat
- Improving forage quantity and quality
- Removing slash and debris following forest management activities
- Enhancing seed and seedling production
- Facilitating distribution of grazing and browsing animals

Safety precautions are carefully planned before the burn and monitored during the burn. Existing barriers, such as streams, lakes, roads, wetlands, and constructed firebreaks, are important considerations in planning the practice.

This is a highly specialized practice that requires intensive training and sufficient support personnel and equipment. A safe, successful burn must be timed for proper humidity, wind conditions, air temperature, and fuel conditions (ignitable vegetation).

ADDITIONAL INFORMATION, INCLUDING DESIGN CRITERIA AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 338.

#### PRESCRIBED GRAZING

Definition: Prescribed grazing is the controlled harvest of vegetation with grazing animals, managed with the intent to achieve a specific objective.



#### **Practice Information**

This practice may be applied on all lands where grazing or browsing animals are managed. Removal of herbage by the grazing animals is in accordance with production limitations, plant sensitivities, and management goals. Frequency of defoliations and season of grazing are based on the rate of growth and physiological condition of the plants. Duration and intensity of grazing are based on desired plant health and expected productivity of the forage species to meet management objectives. In all cases, enough vegetation is left to prevent accelerated soil erosion.

Application of this practice will manipulate the intensity, frequency, duration, and season of grazing to:

- 1. Improve water infiltration
- 2. Maintain or improve riparian and upland area vegetation
- 3. Protect streambanks from erosion
- 4. Manage for deposition of fecal material away from water bodies
- 5. Promote ecological and economically stable plant communities which meet landowner objectives

A prescribed grazing schedule will be prepared for all fields and pastures and recorded in a manner that is readily understood and useable by the decision maker. The grazing schedule should include the following information:

- 1. Expected forage quality and quantity for all lands providing forage
- 2. Numbers and kinds of animals using available forage on the unit
- Inventory of all sources of forage and supplemental feed, including documentation of surpluses and deficiencies
- 4. A planned grazing schedule for livestock showing periods of grazing, rest, and other activities for all fields and pastures included in the grazing plan
- A contingency plan that details potential climatic problems and a guide for adjusting to ensure proper management of forage resources

ADDITIONAL INFORMATION, INCLUDING PRACTICE SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE

#### RIPARIAN FOREST BUFFER

Definition: A riparian forest buffer is an area of trees and/or shrubs adjacent to a body of water. The vegetation extends outward from the water body for a specified distance necessary to provide a minimum level of protection and/or enhancement.



#### **Practice Information**

This practice applies to areas adjacent to permanent or intermittent streams, lakes, ponds, wetlands, and areas associated with ground water recharge.

The riparian forest buffer is a multipurpose practice designed to accomplish one or more of the following:

- Create shade to lower water temperatures and improve habitat for aquatic animals
- Provide a source of debris necessary for healthy, robust populations of aquatic organisms and wildlife
- Act as a buffer to filter out sediment, organic material, fertilizer, pesticides, and other pollutants that may adversely impact the water body, including shallow ground water

Dominant vegetation consists of existing or planted trees and shrubs suited to the site and purposes of the practice. Grasses and forbs that come in naturally further enhance the wildlife habitat and filtering effect of the practice.

Headcuts and streambank erosion should be assessed and treated appropriately before establishing the riparian forest buffer.

Specifications for each installation are based on a thorough field investigation of each site.

ADDITIONAL INFORMATION, INCLUDING PRACTICE SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 391; FOR HERBACEOUS BUFFERS, SEE PRACTICE CODE 390.

#### **USE EXCLUSION**

Definition: Use exclusion means excluding animals, people, or vehicles from an area.



#### **Practice Information**

The purpose of use exclusion is to protect, maintain, or improve the quantity and quality of the natural resources in an area. The purpose includes aesthetic resources, as well as human health and safety.

The practice is used in a conservation plan in areas where vegetation establishment or maintenance is a concern. Protecting the vegetation is often essential to conserving the other natural resources. The barriers constructed for use exclusion must be adequate to prevent intrusion of the target animals, vehicles, or people. The barriers usually are fences, but also may be natural and artificial structures, such as logs, boulders, earth fill, gates, signs, etc.

ADDITIONAL INFORMATION, INCLUDING DESIGN CRITERIA AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 472.

#### WASTE UTILIZATION

Definition: Waste utilization includes applying agricultural waste or other waste on the land in an environmentally acceptable manner while maintaining or improving the natural resources.



#### **Practice Information**

This practice may be used on any land suitable for application of waste as a fertilizer. This includes waste from barnyards, feedlots, dairy operations, and other agricultural sources. The waste material also may come from municipal treatment plants and food processing plants.

The purposes of applying this practice include the following:

- 1. Provide safe disposal of waste material
- 2. Provide fertility for food and fiber production
- 3. Improve soil tilth and fertility
- 4. Reduce erosion
- 5. Protect water and other natural resources

ADDITIONAL INFORMATION, INCLUDING SPECIFICA-TIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 633.

We are very interested in your comments about the self-assessment process and this workbook. Please send your suggestions to farmbillrules@usda.gov

### Thank you!

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